

# Arts



Sir George Williams  
Faculty of Arts

## Geography





SIR GEORGE WILLIAMS CAMPUS

DEPARTMENT OF GEOGRAPHY

COURSE GUIDE

1976-77

This course guide has been prepared months in advance of the 1976-77 academic year and information contained herein is subject to change.

Students are advised not to purchase any texts without the approval of the department or professor concerned.



THE UNIVERSITY OF TORONTO

DEPARTMENT OF GEOGRAPHY

COURSE GUIDE

1976-77

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## THE GEOGRAPHY DEPARTMENT

The Geography Department has an independent location in two older houses modified to their own design, across the street from the Main Hall Building of the Campus 2080 Mackay Street houses the departmental and professorial offices, and interconnects with 2090 which is dedicated to a student resource area, with cartographic and physical laboratories, the University map library, departmental reading room and a seminar room. It is the policy to make resources and instruments available easily, with a minimum of bureaucracy. The close juxtaposition of resources and facilities allows constant casual interaction between faculty and students, which tends to produce a strong esprit de corps.

### DEPARTMENTAL OFFICE

2080 Mackay Street  
Room X-105  
Telephone: 879-5880

### SECRETARIES

Ms. Kathleen Fitzpatrick  
(Secretary to the Chairman)

Ms. Lauren Barnes

### CHAIRMAN

Dr. David B. Frost  
Room X-103  
Telephone: 879-4403



FACULTY

	<u>Room No.</u>	<u>Telephone</u>
S. Robert Aiken, Ph.D (Penn State) Human & Cultural Geography	X-203	879-2825
Jacqueline Anderson, M.Sc. (Alberta) Cartography	X-304	879-2819
Ronald W.G. Bryant, M.A. (London) Urban Planning & Resource Geography	X-204	879-2891
Harry Clinch, M.A. (Toronto) Historical & Human Geography	X-205	879-5913
Donald A. Fraser, Ph.D. (Toronto) Biogeography & Forestry	X-02	879-2816
David B. Frost, Ph.D (Birmingham) Climatology & Middle America	X-103	879-4403
Michael Marsden, M.Sc. (McGill) Geomorphology & the Arctic Lands	X-305	879-2849
Brian Slack, Ph.D (McGill) Economic Geography & Canada	X-05	879-2887
James W. Young, Ph.D (McGill) Economic Geography & Quantitative Methods	X-303	879-5924

PART-TIME FACULTY

Leslie Takack, M.A. (Sir George Williams) Cartography	H-341	879-5849
Bogdon Zaborski, Ph.D (Warsaw) Human Geography & the U.S.S.R.		

TECHNICAL OFFICER

Miss V. Janes, B.A. (Sir George Williams) Map Librarian	Z-205	879-2815
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STUDENT PARTICIPATION

The Sir George Geography Students Society is wholly run by its members, which allows initiative in choosing guest lecturers, organizing field trips and other activities, including social events, which help expand awareness of the discipline and also allow expression within it.

Students participate in all decisions of the Geography Department through four representatives at the Departmental Meetings. The President of the Sir George Geography Students Society is automatically a member, and the other three are elected from among the students by vote including all students taking geography courses, day or evening. The four student members have full voting rights at the meetings and choose their representatives for each sub-committee of the Department.

THE ADVISING SYSTEM

This system is intended to provide every major and honours candidate in Geography with a faculty advisor for the duration of his enrollment at Sir George. The advantages include:

- 1) Easy expression of concerns and suggestions by every student.
- 2) Discussion of academic and career objectives aimed at formulating them accurately and early in a career, with advice based upon a sound personal acquaintance.
- 3) Help and advice with routine academic and administrative problems.
- 4) The provision of letters of reference after graduation; often as important as grades for employment and graduate work.
- 5) A personal contact with the Faculty in a crisis of any sort.

The programme is administered by the Honours and Majors Advisor, Professor H. Clinch.

## ENTRY FROM CEGEP

All students require two CEGEP courses in mathematics before entering a geography programme, but exceptions can be made for those confining themselves to Human and Historical geography. The University provides special make-up courses specifically for those who wish to use the opportunity for credit.

The mathematics requirement may be modified in the future by agreement with all other Geography Departments in Quebec. Nevertheless, serious students are advised that it is to their advantage to acquire mathematics to help them make the most out of the increasingly quantitative nature of modern Social Sciences.

## CEGEP GEOGRAPHY CREDITS

Concordia welcomes students whether they have taken Geography at CEGEP or not, and introductory courses are designed to help those who may not have done advanced work in the subject. Those applicants who have taken several courses at CEGEP which provide the fundamental base may be exempted from the appropriate introductory requirement, and may proceed to more advanced work, replacing the elementary work with an advanced and interesting topic. This privilege is not automatic, and it is worth consulting a Geography faculty member about such an exemption, since experience suggests that those with marks below 70% in CEGEP may benefit throughout their career by rejecting the exemption and mastering the basic work.

## JANUARY ENTRY

Increasing numbers of students are entering the University in January as opposed to September. The Department offers a special section of Geography N211, Introduction to Human Geography, for such students. This full 6-credit course meets for 5 hours a week, rather than the usual 2 1/2 hours and is thus referred to as running at double time.

Students who have taken a cartography credit in CEGEP may be exempted from the first part of cartography (N260). Such students would then be eligible for N261, Introduction to Cartography II. Students who have 15 or more credits in Geography at CEGEP may be eligible for Geography N350, The Geography of Agriculture. Any students planning to take either N261 or N350 should discuss the matter with a member of the Geography Department.

## DAY AND EVENING COURSES

Concordia offers degrees for full-time and part-time students. For this reason some courses are only available in the evening in certain years while a few courses, catering to only a handful of students, are only offered in the evening.

All courses required for the major are always available in both day and evening. Certain courses not available in 1976/77 will be offered in 1977/78. These are:

- N372 Environmental Analysis
- N412 Political Geography

Certain other courses are unlikely to be offered in the day time such as:

- N345 Geography of a Selected Region
- N422 Historical & Political Geography of Quebec & Ontario
- N466 Applied Cartography
- N401 Advanced Urban Studies
- N491 Research Methods

Students should discuss their programmes with their advisors to ensure that they do not take an excessive number of night courses.



## DEGREE REQUIREMENTS

Graduation with a B.A. requires:

- 1) Successful completion of 90 credits at the University level.
- 2) Successful completion of a major, honours or double minor programme as outlined below.
- 3) A minimum of 42 credits at the 300 or 400 level.
- 4) Students may take no more than 66 credits in one department and no more than 78 credits in the Social Science Division of the Faculty of Arts.

### GEOGRAPHY PROGRAMME REQUIREMENTS\*

Students who entered Geography programmes prior to 1973/74 may find differences between their programmes and those listed below. In such cases students should discuss any necessary changes with their advisors.

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 \*3-year, 90-credit degree. Students following the old 4-year programme should consult the 1970/71 S.G.W.U. Calendar. Students following the 120 extended credit programme should consult with their advisor.

### A) MAJOR IN GEOGRAPHY

A 'major' is an approved sequence of courses, including a minimum of 42 credits in Geography and a maximum of 66. In certain cases courses in closely related fields may be substituted for Geography courses but this must be approved by the student's advisor and by the departmental Honours and Majors advisor.

The following courses constitute a major in Geography:

#### FIRST YEAR

1. Geography N211, Introduction to Human Geography (6 credits)
2. Geography N260 and N261, Introduction to Cartography I and II (3 + 3 credits)
3. Geography N271, The Natural Environment Geography (6 credits)

#### SECOND YEAR

4. Geography N341, Regional Geography of Canada\* (6 credits)
5. Geography N362, Quantitative Geography I (3 credits)

#### SECOND or THIRD YEARS

6. Geography N391, History of Geographical Thought (3 credits)
7. 12 additional credits in Geography at the 300 or 400 level (12 credits)

\* Students who have credit from CEGEP for a course in Canadian geography may wish to substitute "Geography N345, Geography of a Selected Region" after consultation with their advisor.

## B) HONOURS IN GEOGRAPHY

An honours degree is almost essential to anyone wishing to become a professional geographer. It is also the fundamental requirement for entry into graduate school. Standards and grading requirements are high, but honours candidates have special advisors and a special individualized course in their last year.

The University has approved programs leading to an Honours degree in certain selected fields. An honours degree indicates specialization within a field, and high academic standing. In order to qualify for an honours degree a student must meet all of the academic qualifications and comply with the regulations set forth below.

1. A candidate for an honours degree should indicate such intention at registration and consult the honours representative of the department(s) concerned as soon as possible. Acceptance as an honours student will depend on performance during the first year. The honours standing will be reviewed annually.

A student who has followed the courses prescribed for the honours program and has met all the requirements may enter the program with the approval of the honours representative any time before beginning the final 30 credits. No retroactive approval of entry may be made.

2. A student who enters with advanced standing may apply pro tanto credits which are applicable to the honours degree requirements, upon approval by the department(s).

A transfer student must complete a minimum of 30 credits in the basic honours program in residence to receive a degree with honours.

3. An honours student must maintain a 'B' average with no grade lower than 'C' in all courses in the basic honours program.

An honours student must meet the general degree requirements as well as the specific requirements for an honours degree, and must obtain at least a 'C' average over the total degree program.

Failure in any course will mean suspension or withdrawal from the honours program. Students who fail to meet acceptance requirements and who are required to withdraw from the honours program will proceed as majors. Reinstatement into the honours program is possible only by recommendation by the honours representative.

4. A student shall be allowed to qualify for only one honours degree in either a single or combined honours program.
5. A degree with honours in any program is granted upon graduation only with the approval of the Senate.

### Course Requirements

1. All honours students must take the first six courses specified under the major regulations, comprising 30 credits.

2. SECOND and THIRD YEARS

Students must take an additional 18 credits in Geography within their area of concentration. Three possible areas of concentration are currently offered as listed below:

#### Pattern 'A' - Physical Geography:

Geography N371	- Biogeography	(6 credits)
Geography N372	- Environmental Analysis	(6 credits)
Geography N373	- Climatology	(6 credits)
Geography N475	- Hydrology I	(3 credits)
Geography N476	- Hydrology II	(3 credits)

#### Pattern 'B' - Human/Historical Geography:

Geography N316	- Cultural Geography	(6 credits)
Geography N322	- Historical Geography of the United States	(6 credits)
Geography N323	- Historical and Political Geography of Europe	(6 credits)
Geography N412	- Political Geography	(6 credits)
Geography N422	- Historical and Political Geography of Quebec and Ontario	(6 credits)

Students following Pattern 'B' may take an additional regional course.



Pattern 'C' - Economic/Urban Geography:

Geography N331 - Urban Geography	(6 credits)
Geography N350 - Geography of Agriculture	(3 credits)
Geography N351 - Forest Geography	(3 credits)
Geography N355 - Spatial Organization	(6 credits)
Geography N357 - Resource Utilization and Conservation	(6 credits)
Geography N401 - Applied Urban Geography	(6 credits)
Geography N451 - Special Seminar in Economic Geography	(6 credits)
Geography N457 - Geography of Transportation	(6 credits)

3. An additional 6 credits not listed under the student's pattern of specialization.
4. Geography N491 - Research Methods  
This course may only be taken in the student's final year.

(Total: 60 credits)

C) SPECIALIZATION IN GEOGRAPHY

The specialized programme is designed for students who wish to pursue Geography beyond the major level, concentrating in one branch of the discipline, without the rigors of the Honours programme. It might be noted that such a programme puts students in a more favourable position when applying to the Federal Government than those with a major.

The following courses comprise a Specialization in Geography.

1. All students must take the first seven courses specified under the major regulations, namely, N211, N260, N261, N271, N341, N362, N391. (30 credits)

2. Second and Third Years

Students must take an additional 18 credits in Geography from within their chosen area of concentration. Three areas of concentration are currently offered as listed below. Students may substitute an approved 6 credit option outside Geography.

A. Physical Geography

Geography N371	Biogeography	(6 credits)
Geography N372	Environmental Analysis	(6 credits)
Geography N373	Climatology	(6 credits)
Geography N475	Hydrology I	(3 credits)
Geography N476	Hydrology II	(3 credits)

B. Human/Historical Geography

Geography N316	Cultural Geography	(6 credits)
Geography N322	Historical Geography of the United States	(6 credits)
Geography N323	Historical and Political Geography of Europe	(6 credits)
Geography N412	Political Geography	(6 credits)
Geography N422	Historical and Political Geography of Quebec and Ontario	(6 credits)

C. Economic/Urban Geography

Geography N331	Urban Geography	(6 credits)
Geography N350	Geography of Agriculture	(3 credits)
Geography N351	Forest Geography	(3 credits)
Geography N355	Spatial Organization	(6 credits)
Geography N357	Resource Conservation and Utilization	(6 credits)
Geography N401	Advanced Urban Studies	(6 credits)
Geography N451	Special Seminar in Economic Geography	(6 credits)
Geography N457	Geography of Transportation	(6 credits)

3. Second and Third Years

Students must take an additional 12 credits in Geography.

(Total: 60 credits)

D) MINOR IN GEOGRAPHY

A 'minor' is composed of two approved sequences of 30 credits in any two specific fields or disciplines. For example, Geography and Sociology or Geography and History. The term 'minor' as used by Concordia University implies that the student has followed, within the requirements for a degree, a planned programme of study in two specialized fields with a lower degree of specialization than is afforded by a major or honours programme.

The University Undergraduate Calendar lists all the available "minors" and the student may select any two of these.

The following courses comprise the minor in Geography:

1. Geography N211 - Introduction to Human Geography (6 credits)
2. Geography N260 - Introduction to Cartography I and II (3+3 credits) (6 credits)
3. Geography N271 - The Natural Environment (6 credits)
4. 12 credits in Geography at the 300 or 400 level (12 credits)

(Total: 30 credits)



## G E O G R A P H Y   A T   L O Y O L A

The Geography Department offers courses within the Loyola Faculty of Arts and Science leading to either B.A. or B.Sc. Minors in Geography. These courses and programmes are described in a separate brochure. Some students wishing Majors, Specializations or Honours in Geography transfer to the Sir George Campus and their Geography courses are accepted for credits. For convenience it should be noted that the following direct equivalences exist.

<u>Sir George</u>	<u>Loyola</u>
N211	331 and 333
N271	311 and 313
N260 and N261	301 and 303
N341	420

Any students contemplating a transfer are requested to discuss the matter with the Departmental Chairman at Sir George before registration.

## S U M M E R   S C H O O L

The Geography Department offers courses both in the Day and in the Evening during the summer. The courses offered in the evening are intended to help Evening Division students move more rapidly towards completion of their degrees while the Special Day Summer School is intended to enrich the courses available to all students at Concordia and also to provide new and interesting courses for geographers who have already graduated.

Thus evening courses are directly applicable to the requirements for major, minor or honours degrees but those from the Day Session are not. However, many Day Summer courses would make intelligent substitutions into many students programmes and any interested students should discuss this possibility with their advisors. If the substitution is approved the Department will assist and support the students' appeal to either the Honours Committee or the Student Request Committee of the Faculty of Arts. In previous years no difficulties have been encountered with these procedures.

Details of the 1976 Summer Schools should be available from the Geography Department Office after March 15, 1976.

## COURSE OFFERINGS AND DESCRIPTIONS

1976 - 77

## GEOGRAPHY N211

Introduction to Human Geography (6 credits)

Instructor: Day: S. Robert Aiken TT 14:45 - 16:00 Room: H-820

Description: The course is both methodological and substantive. Four major themes are discussed: (1) Methods and concepts; (2) Man/environment relations; (3) Spatial pattern and process; (4) Culture realms and the cultural landscape. Examples are drawn from a wide range of socio-economic and cultural contexts both past and present. A detailed course outline is available on request.

Texts: Haggett, Peter. Geography: A Modern Synthesis. New York: Harper and Row, 1975; second edition.

Broek, J.O.M. and Webb, John W. A Geography of Mankind. New York: McGraw-Hill Book Company, 1973; second edition.

Purchase one of the above. You are expected to read both.

Goodes World Atlas. Strongly recommended.

Assignments & Grading: (1) Mid-term (25%); (2) Essay Project (25%); (3) Final (50%).

Prerequisite: None

GEOGRAPHY N211 (211)  
INTRODUCTION TO HUMAN GEOGRAPHY (6 credits)

Instructor: Night: H.A. Clinch Tues 18:15 - 20:30 Room H-820

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Description: A study of the evolution of the earth's populated area and the gradual enlargement of geographical horizons. The emphasis will be on cultural distributions, landscape and settlement, and the geography of economic, social and political activities.

Texts: J. BROEK and J. WEBB, A Geography of Mankind (McGraw-Hill). Required text.

Goodes World Atlas, (Rand McNally). Strongly recommended.

Assignments & Grading: Attendance is kept. Students are expected to have at least a 70% attendance and students who fail tests and term papers with less than a 70% attendance are given an R grade.

The final mark is determined:

- 1) By four class tests based on the lectures and text. Students are allowed to re-write the first class test if they fail it. . . . . 45%
- 2) Class tests, assignment and attendance. . . 5%
- 3) A term paper which attempts to map and explain the problem of population distributions and density of a given political area. . . . . 50%

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Total ... 100%

Prerequisite: None

GEOGRAPHY-INTERDISCIPLINARY STUDIES N212 (212)  
EARLY MAN (6 credits)

Instructor: TBA Evening Summer School

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Description: An examination of the scientific evidence for the unwritten part of man's evolutionary history. The course will study both food-gathering man and food-producing man. The roles of the biological and cultural components will be considered as well as the factor of environment.

Texts: TBA

Assignments & Grading: TBA

Prerequisite: Geography N211, or 2nd year standing in honours or departmental major programme in a Social Science.



## GEOGRAPHY N260 (260)

## INTRODUCTION TO CARTOGRAPHY - I (3 credits)

Instructor:	TBA	Lecture	Tues	10:15 - 11:30	H820
		Lab A	Tues	11:45 - 13:00	Z301
		Lab B	Tues	14:45 - 16:00	Z301
		Lab C	Thurs	10:15 - 11:30	Z301

Description: An introduction to the study of the topographic map as a tool of the geographer. This course will focus on the various stages involved in map production and map interpretation. Laboratory assignments of a practical nature, which are complementary to the lectures, form an important part of the course.

Texts: A.H. ROBINSON and R.D. SALE, Elements of Cartography (Wiley International). Required text.

Assignments & Grading: A series of practical assignments given week by week will account for 60% of the final grade. A 3 hour final examination worth 40% of the total grade will test comprehension of the material covered in the lectures.

Prerequisite: None.

## GEOGRAPHY N261 (261)

## INTRODUCTION TO CARTOGRAPHY - II (3 credits)

Instructor:	TBA	Lecture	Tues	10:15 - 11:30	H820
		Lab A	Tues	11:45 - 13:00	Z301
		Lab B	Tues	14:45 - 16:00	Z301
		Lab C	Thurs	10:15 - 11:30	Z301

Description: A study of the basic cartographic methods available for presenting quantitative and qualitative statistical data on maps. Laboratory assignments of a practical nature form an important part of the course.

Texts: F.J. MONKHOUSE and H.R. WILKINSON, Maps and Diagrams (University Paperback, Methuen). Required text.

Assignments & Grading: A series of practical assignments given week by week will account for 60% of the final grade. The assignments will include a personal project. A 3 hour final examination worth 40% of the total grade will test comprehension of the material covered in the lectures.

Prerequisite: Geography N260 or permission of the Department.

GEOGRAPHY N271 (231)  
INTRODUCTION TO PHYSICAL GEOGRAPHY (6 credits)

Instructor: Day : M. Marsden TT 16:15 - 17:30 Room  
Night : P. Green Mon 18:15 - 20:30 Room

(M. Marsden)

**Description:** An introduction to the earth sciences as they relate to the environment of man, with special emphasis upon weather, climate and the evolution of landscape. A treatment of weather, climate, and landscape as an integrated study of total environment, with a stress on the 'systems' approach. The emphasis is upon interactions, process and elementary quantitative methods although the conventional descriptive approach is not neglected.

**Text:** A.N. STRAHLER and A.H. STRAHLER, Environmental Geoscience (Wiley).

**Assignments & Grading:** Precise conditions confirmed in second week of lectures but essentially eight progress examinations or practical assignments in different modes, plus a final 3-hour examination.

(P. Green)

**Description:** This course will offer a unified approach to the earth sciences and the development of the Physical world. Landforms of the earth's surface, plate tectonics, weather, climate, soils and vegetation will be considered as a study of the total environment of man. Both the traditional descriptive approach and elementary quantitative methods will be used in the course.

**Text:** A.N. STRAHLER, Physical Geography (Wiley). Required text.

**Assignments & Grading:** A series of 10 laboratory exercises closely related to the lectures will contribute 50% of the total mark. A midterm exam 20% and a final examination 30%.

**Prerequisite:** None.

**Purpose:** An introduction to all physical geographical studies at the University. It is also suitable for biologists, particularly ecologists; and has interests for geologists concerned with terrain, topography and glaciation. Essential to Majors and Honours sequences and prerequisite to all advanced physical courses.

GEOGRAPHY N273 (273)  
THE SEA (6 credits)

Instructor: M. Marsden Thurs 18:15 - 20:10 Room

**Description:** An integrated physical and human geography of the world ocean. There is an outline of marine exploration from ancient times up to and including modern scientific investigations and human access to the deeps. After an introduction to oceanography (including coasts, waves and tides) there is a discussion of the marine environment for life and the economic use of marine resources. Topics include navigation, ship technology, the role of the sea in cultural diffusion, international law of the sea, and pollution. There will be visiting lecturers and students are expected to participate in the instruction and discussions. Students may pursue personal interests in an individual term paper.

**Text:** Oceans by Deacen is optional, but there is a required reading list in the library reserve as well as a fine wide-ranging collection of books and journals.

**Assignments & Grading:** One essay in the first term (10%), a term paper on an agreed topic (40%), and a final (50%) in an area defined in the first week of classes.

**Prerequisite:** None.



GEOGRAPHY N316 (416)  
HUMAN GEOGRAPHY (6 credits)

Instructor: S. Robert Aiken Mon 18:15 - 20:10 Room H-1135

Description: Cultural geography is concerned with the application of the concept of culture to geographic problems. Culture is a society's "repertory of behavioural, cognitive, and emotional patterns;" it is an "image of the world, of oneself and one's community." The idea of culture is applied within the framework of human geography's major traditions, namely geography as the study of spatial pattern and process; geography as the study of man/environment relationships; and geography as areal differentiation. Attention is focused on the spatial patterning of material and non-material elements of culture (culture areas); on the processes of cultural, temporal and spatial change; on the relationships between man and land (cultural ecology); and especially on how these relationships are reflected in different ensembles of man and land (cultural landscapes). Additional topics covered include: the cultural aspects of environmental perception and attitudes; culture and the perception of time and space; landscape change and changing landscape tastes; house form and culture; religion; language; the cultural geographer and the modern city; and the relationships between social and cultural geography.

Texts: WAGNER, Philip L. and Mikesell, Marvin W.  
Readings in Cultural Geography. Chicago: University of Chicago Press, 1962.

TUAN, Y.F. Topophilia: A Study of Environmental Perception, Attitudes, and Values. Englewood Cliffs: N.J. Prentice-Hall, Inc., 1974. (paperback)

ZELINSKY, Wilbur. The Cultural Geography of the United States. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973. (paperback)

Assignments & Grading: (1) Final exam (40%); (2) Mid-term exam (25%); (3) Essay project (25%); (4) Fieldwork (10%).

Prerequisite: Geography 211, or second year standing in a major or honours programme in a social science.

GEOGRAPHY 322 (421)  
Historical Geography of the United States (6 credits)

Instructor: Day: S. Robert Aiken MW 15:45 - 17:00 Room: Z-105

Description: The course is structured around the following topics:  
(1) Philosophical and methodological issues in Historical Geography.  
(2) The exploration of the Eastern Seaboard; European images of America on the eve of colonization.  
(3) Colonial America: the three core areas of settlement; land and life in New England, the Middle Colonies, and the South; attitudes toward the new-found-land.  
(4) Occupation of the land: settlement, division and use of land; the frontier thesis and the filling in of the continent during the national period.  
(5) Population: origin of settlers; population composition through time; ethnic groups and landscape preference; movement.  
(6) Economic growth and urban evolution; case studies in historical urban geography.  
(7) Spatial and temporal perspectives on material and non-material American culture - names on the land, dialect, religion, architecture, settlement patterns, cultural landscapes.  
(8) Culture areas - New England, the Midland, the South, the Middle West, the West.

Texts: Brown, Ralph H. The Cultural Geography of the United States. New York: Harcourt, Brace, and World, 1948.

Zelinsky, Wilbur. The Cultural Geography of the United States. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

Assignments & Grades: Mid-term (25%); Essay (25%); Final (50%)

Prerequisite: Geography N211, or second year standing in an honours or major programme in a Social Science.

GEOGRAPHY N331 (431)  
URBAN GEOGRAPHY (6 credits)

Instructor: B. Slack Tues 18:15 - 20:10 Room H820

Description: The course is designed to provide the student with a thorough treatment of the field concepts, methods and current research scene of urban geography.

Texts: YEATES, M. & GARNER, B., The North American City. Strongly recommended.

Assignments & Grading: A series of essays and projects, some involving practical field work will account for 50% of the final grade. A final examination accounts for the other 50%.

Prerequisites: Geography N211 or second year standing in an honours or departmental major programme in a Social Science or the Faculty of Commerce.

GEOGRAPHY N341 (441) (141)  
REGIONAL GEOGRAPHY OF CANADA (6 credits)

Instructor: Day: H. Clinch TT 11:45 - 13:00 Room H-1135  
Evening: B. Slack Mon. 20:30 - 22:25

Description: A study of Canada, past and present, based on the various natural regions into which the country is divided. In the first half of the course an historic-geographical approach will be taken to bring to the student's attention the main trends in Canadian cultural and historical development from aboriginal times to the present. The changing nature of man-land relationships at different periods of time, and under different forms of occupation, will receive particular attention. In the second half of the course the present-day pattern of human occupation on a regional and national basis will be analyzed.

Texts: WARKENTIN, J., Canada - A Geographical Interpretation.

GENTILCORE, E., Approaches to Canadian Problems.

Assignments & Grading: There will be a series of practical assignments illustrating points from the lectures that will constitute 40% of the final mark. A term paper will contribute 20% and the final examination the remaining 40%.

Prerequisite: Geography N211 or N271 or second year standing in an honours or major programme in a Social Science or the Faculty of Commerce.



GEOGRAPHY N345 (445)  
 GEOGRAPHY OF A SELECTED REGION (6 credits)  
 1976-77: The Soviet Union

Instructor: B. Zaborski Thurs. 20:30 - 22:25 Rm H-1135

Description: A study of the interaction between physical zonal patterns and the distribution of population and its activities. Consideration will be given to the evolution of Slavic, Turkic and other ethnic groups, and to the territorial expansion of Rus', Russia and the U.S.S.R.

Texts: LYDOLPH, Geography of the Soviet Union.  
 Oxford, Atlas of the Soviet Union and Eastern Europe (Oxford University Press).

Assignments & Grading: Four written class tests and one term paper, each worth 20%.

Prerequisite: Geography N211 or second year standing in an honours or departmental major programme.

GEOGRAPHY N350 (458)  
 GEOGRAPHY OF AGRICULTURE (3 credits)

Instructor: D.A. Fraser Wed 20:30 - 22:25 Room Z-105

Description: Classification of agriculture systems: food production in relation to new biological, cultural and marketing developments. There will be some consideration of land use mapping and land potential assessment.

The course will cover some of the following topics in detail:

- Nature of agricultural geography
- Agriculture and economic development
- Increasing agricultural output
- Economic obstacles to agricultural development
- Quebec and Canadian agriculture
- Land survey for agricultural potential: the Clay belt
- Use of aerial photos and remote sensing in agriculture
- Climates of Canada for agriculture
- Small farm development program
- Soviet agriculture
- Agriculture in Japan
- Agriculture pertaining to the arid lands, the humid lands, the savanna lands, the monsoon lands, specialized topics, irrigation
- Use of radioisotopes and radiation in agriculture

Texts: GRIGG, David, The Harsh Lands  
 MORGAN & MUNTUN, Agricultural Geography  
Climates for Agriculture in Canada,  
 Farm Report: Weekly Winnipeg Free Press  
 Selected journals and reprints.

Assignments & Grading: Students will be given selected current topics to report upon in class, usually topics headlined in "Farm Reports"

Class and field trip participation.....10%  
 One essay.....20%  
 One mid-term test.....30%  
 One final exam.....40%

Prerequisite: Any 300 level geography or enrollment in an Honours or Major programme in the Faculty of Science.

GEOGRAPHY N351 (351)  
FOREST GEOGRAPHY (3 credits)

Instructor: D.A. Fraser Wed 20:30 - 22:25 Room Z-105  
(Second Term)

Description: A study of the natural development and distribution of world forests, their modification by human interference and the economic impact of forest management. Actual problems will be examined in a Quebec context both in class and in the field.

Text: No specified text. List of publications to be made available at the first class.

Assignments & Grading: Students will be given selected current topics to report upon in class.

Class and field trip participation	10%
Essay	20%
Mid-term test	30%
Final examination	40%

100%

Prerequisite: Geography N271 and N211 or enrollment in an honours or major program in the Department of Biology.

GEOGRAPHY N355 (455)  
SPATIAL ORGANIZATION (6 credits)

Instructor: J.W. Young TT 14:45 - 16:00 Room: H-843

Description: A study of how man organizes spatial activities with the emphasis on the concepts of spatial interaction, location of activities, diffusion and individual decision.

Texts: ABLER, ADAMS & GOULD, Spatial Organization.

Assignments & Grading: Emphasis on progressive exercises and a term paper. The first term will deal with techniques and there will be up to 10 exercises. Some exercises will be done on the computer by calling pre-packaged programmes designed by geographers for analyzing land use, industrial location, spatial simulation, structure of transport networks, etc. I assume that the students' knowledge of Mathematics and the computer is nil.

Prerequisite: Geography N211 or second year standing in an honours or major programme in a social science or the Faculty of Commerce.

GEOGRAPHY N357 (457)  
RESOURCE UTILIZATION AND CONSERVATION (6 credits)

Instructor: R. Bryant Thurs 18:15 - 20:30 Room H-1135

Description: The resource concept and concepts of conservation. The regional approach to resource management. Case studies of the problems in developing particular natural resources and of interstate areas of poor economic health, with emphasis on the regional and natural parts of such developments. Special emphasis will be given to Canadian problems and those of selected underdeveloped countries.

Texts: DASMANU, Raymond, Environmental Conservation.

Assignments & Grading: T.B.A.

Prerequisite: Geography N211 or second year standing in an honours or departmental major programme in a social science or the Faculty of Commerce.

GEOGRAPHY N362 (242)  
QUANTITATIVE GEOGRAPHY I (3 credits)

Instructor: J.W. Young

1st Term: Section X TT 13:15 - 14:30 Room: H-1135  
Lab. A Tue 9:00 - 11:00 Room: H-980  
Lab. B Wed 8:45 - 10:40 Room: H-980

2nd Term: Section XX Tue 18:15 - 20:10 Room: H-1135  
Lab. AA Tue 20:30 - 22:25 Room: H-980

Description: An introductory course in the applications of descriptive and analytical statistical techniques in Geography. Lectures and laboratory.

Texts: HAMMOND & McCULLAGH, Quantitative Techniques in Geography, Oxford University Press.

Assignments & Grading: Labs will count for 30%; a lab examination and final examination will make up the remaining 70%.

Prerequisite: Geography N261.



GEOGRAPHY N371 (471)  
BIOGEOGRAPHY (6 credits)

Instructor: D.A. Fraser MW 14:10 - 15:25 Room H-1135

Description: A study of distribution of plants and animals with emphasis on their soil and climatic inter-relations. Relevant field trips are included. Scope of biogeography in the biosphere, ecosystems and the environment. Scientific nomenclature; the climax concept; succession, vegetation and animals of Quebec, Canada, North America, interrelations with climate and soil and with each other. The spruce budworm, tent caterpillar - effect of fire. Mammals of the islands in the Gulf of St. Lawrence. Biogeography of marine mammals. Energy: sources and availability; laws of energy exchange. Uses of radiation and radioisotopes in biogeography. Food chains: techniques for vegetation and animals assessment. Ecological pyramids, biomass. Energy transfers within selected ecosystems. Biological productivity in ecosystems. Biogeochemical cycles within ecosystems. Environmental limitations in ecosystems development. Concept of tolerance; limits of tolerance in terrestrial ecosystems, light, heat, humidity and moisture, wind, topography, soils-decimal classification of soil moisture regimes...ecoclimates. Population limitations within ecosystems. World patterns of distribution of organisms - specific areas considered in detail - Europe; Soviet Union, Australia, Africa, South America. Man in ecosystems - conservation. There are compulsory field excursions.

Texts: WATTS, David, Principles of Biogeography (McGraw Hill).

Assignments & Grading:

Class and field trip participation.....	10%
Two essays.....	20%
Two mid-term tests.....	30%
One final examination.....	40%

Total....100%

Prerequisite: Geography N271 or second year standing in an honours or departmental major programme in the Faculty of Science.

GEOGRAPHY N372 (472)  
ENVIRONMENTAL ANALYSIS (6 credits)

Instructor: TBA To be offered in the Evening Summer School 1976

Description: A series of case studies designed to introduce students to specialization in Physical Geography. They include the means of precise evaluation of varied present day environments, the practical means of evaluating past environments, the construction of the Pleistocene chronology, and the means of integrating field observations in order to prepare denudation histories. In smaller classes, students are offered some choice of topics within the prescribed framework.

Texts: None. There is a short required reading list held in the Reading Room and a longer list of recommended readings in reserve.

Assignments & Grading: Assignments and grading depend upon class size and whether there is a seminar format, or lectures plus practical assignments. In the first case, evaluation is by a review paper, seminar performances and a final 3-hour examination. In the latter, by four major essays, practical assignments through the course and a final 3-hour examination.

Prerequisite: Geography N271 or second year standing in an honours or major programme in the Faculty of Science.

Purpose: To move from generalities to the particular in Physical Geography and provide an insight into the range of specialized possibilities for future work. The course also provides an overview of the Pleistocene epoch with special reference to Canada.

GEOGRAPHY N373 (473)  
CLIMATOLOGY (6 credits)

Instructor: D.B. Frost Tues 20:30 - 22:25 Room H-1135

Description: The first section of the course concentrates on tracing the exact paths of the exchanges of energy and water within the biosphere. The implications of these exchanges for the general circulation of the atmosphere will be stressed.

The second section deals with a number of topics in modern meteorology while the final section is devoted to applied climatology. For this last section students will have prepared a term paper on an agreed topic and they will present this material to the class in the form of a seminar.

Texts: Recommended but not required.  
MATHER, J., Climatology: Fundamentals and Applications.

SELLERS, Physical Climatology

Assignments & Grading: Practical assignments.....30%  
Term paper.....20%  
Mid-term examination.....10%  
Final examination.....40%

Prerequisite: Geography N271 or second-year standing in an honours or major programme in the Faculty of Science.

GEOGRAPHY N391 (461)  
HISTORY OF GEOGRAPHICAL THOUGHT (6 credits)

Instructor: M. Marsden

1st Term Evening: Tue 18:15 - 20:10 Room: H-1135

2nd Term Day: TT 13:15 - 14:30 Room: H-1135

Description: A study of the development of the field of geography from ancient times down to the present. Representative geographical works of the Greeks, the Romans and the Middle Ages. The Age of Discovery, the 19th and 20th centuries will be examined and discussed. The present-day concepts of the field and function of geography will receive special attention. Not historical geography, but an attempt to identify the philosophies and purposes of geography from the earliest times to the present. Although there is special emphasis upon the great variety of present-day approaches, students may expand their comprehension of any period of their choice.

Texts: JAMES, P., All Possible Worlds; Reading Room has required readings, and there is a long list of recommended reading held in reserve.

Assignments & Grading: Evaluation is based upon 3 major essays during the course and a final 3-hour examination.

Prerequisite: Geography N211; but see special comment.

Purpose: To make geography specialists undertake an informed examination of their disciplines, their work, and themselves, and so prepare a coherent understanding of their own views and purpose. It also hopes to demonstrate the independence and validity of geography as a discipline. No one view is expounded or demanded but a certain breadth of knowledge and rigour of expression is required. Since this is an overview course, students should delay taking it until they have extensive experience of readings in Geography.



GEOGRAPHY N401 (434)  
ADVANCED URBAN STUDIES

Instructor: R. Bryant Mon 16:00 - 18:00 Room H-820

**Description:** A study of urban centres today with the emphasis on the problems arising from urban growth. Attention will be given to the various ways of guiding urban growth - zoning by-laws, and European development controls, and the possibilities of planned development.

**Texts:** This course is based on books, films and tapes from the Open University in England.

**Assignments & Grading:** T.B.A.

**Prerequisite:** Geography N211 or Urban Studies N260 and Geography N331 previously or concurrently.

GEOGRAPHY N422 (422)  
HISTORICAL & POLITICAL GEOGRAPHY OF QUEBEC AND ONTARIO (6 credits)

Instructor: H.A. Clinch Wed 18:15 - 20:10 Room Z-105

**Description:** A study of an historical nature of past geographic patterns - economic, social, cultural and political - in Quebec and Ontario.

**Texts:** QUIMBY, Indian Life in the Upper Great Lakes ; University of Chicago Press.

KERR, Historical Atlas of Canada ; University of Toronto Press.

HARRIS & WARKENTIN, Canada Before Confederation ; University of Toronto Press.

TRUDEL, M., An Atlas of New France , Laval University Press.

**Assignments & Grading:** It is expected that this course will have a small enough registration to be held as a seminar. In this case, attendance of 70% or more is essential.

Grades will be determined by:

- 1) Participation in seminar.....50%
- 2) One written paper on Sources.....10%
- 3) Two short geographical papers organized on different time basis and spatial areas.....40% (20% each)

The subject of these papers to be worked out by teacher and student.

Total....100%

No final examination

**Prerequisite:** Geography N341.

GEOGRAPHY N423  
HISTORICAL AND POLITICAL GEOGRAPHY OF EUROPE (6 credits)

Instructor: H.A. Clinch Wed 20:30 - 22:25 Room:

Description: A regional survey of the geographical evolution of European nations and states. Consideration will be given to cultural differentiation and to the distribution of population.

Texts: EAST, W. Gordon, An Historical Geography of Europe (Methuen & Co. Ltd.)

SMITH, C.T., An Historical Geography of Western Europe Before 1800 (Longmans)

PALMER, R.R., Historical Atlas of the World (Rand McNally) or BREASTED, HUTH, HARDING, European History Atlas (Denoyer-Geppert Co.)

Assignments & Grading: It is expected that this course will have a small enough registration to be held as a seminar. In this case, attendance of 70% or more is essential.

Grades will be determined by:

- |  |     |
|--|-----|
| 1) Participation in seminar.....   | 50% |
| 2) One written paper on Sources.....   | 10% |
| 3) Two short geographical papers organized each on a different time basis and spatial area (20% each)..... | 40% |
| The subject of these papers to be worked out between instructor and student.                               |     |

Total ... 100%

No final examination

Prerequisites: One of Geography N316, N321, N331, N343, N355, or permission of the instructor.

GEOGRAPHY N451 (452)  
SPECIAL SEMINAR IN ECONOMIC GEOGRAPHY (6 credits)

Instructor: J.W. Young Tues 20:30 - 22:25 Room: Z-105

Description: This course will provide opportunities to senior students for discussion and advanced study. Subject matter will vary from year to year to take advantage of the special interests of the seminar leader. In 1976-77 the emphasis in the presentations will be more on individual research of the topic and less on presenting someone's writings. Topics covered are:

- 1) Income disparities and performance of the economy.
- 2) Growth theories in a geographical space, export base, the urban system, etc., including short-term cyclical movements.
- 3) Empirical analysis of the above, information theory, shift and share, factorial models, econometric models, probabilistic models.
- 4) Manpower patterns, unemployment, migration.
- 5) Manpower policies of the Federal Government.
- 6) Regional policies, DREE etc.

Texts: None.

Assignments & Grading: Evaluation is based upon a major term paper, student presentations and a take-home examination.

GEOGRAPHY N423  
HISTORICAL AND POLITICAL GEOGRAPHY OF EUROPE (6 credits)

Instructor: H.A. Clinch Wed 20:30 - 22:25 Room:

Description: A regional survey of the geographical evolution of European nations and states. Consideration will be given to cultural differentiation and to the distribution of population.

Texts: EAST, W. Gordon, An Historical Geography of Europe (Methuen & Co. Ltd.)

SMITH, C.T., An Historical Geography of Western Europe Before 1800 (Longmans)

PALMER, R.R., Historical Atlas of the World (Rand McNally) or BREASTED, HUTH, HARDING, European History Atlas (Denoyer-Geppert Co.)

Assignments & Grading: It is expected that this course will have a small enough registration to be held as a seminar. In this case, attendance of 70% or more is essential.

Grades will be determined by:

- |  |     |
|--|-----|
| 1) Participation in seminar.....   | 50% |
| 2) One written paper on Sources.....   | 10% |
| 3) Two short geographical papers organized each on a different time basis and spatial area (20% each)..... | 40% |
| The subject of these papers to be worked out between instructor and student.                               |     |

Total ... 100%

No final examination

Prerequisites: One of Geography N316, N321, N331, N343, N355, or permission of the instructor.

GEOGRAPHY N451 (452)  
SPECIAL SEMINAR IN ECONOMIC GEOGRAPHY (6 credits)

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- 1) Income disparities and performance of the economy.
- 2) Growth theories in a geographical space, export base, the urban system, etc., including short-term cyclical movements.
- 3) Empirical analysis of the above, information theory, shift and share, factorial models, econometric models, probabilistic models.
- 4) Manpower patterns, unemployment, migration.
- 5) Manpower policies of the Federal Government.
- 6) Regional policies, DREE etc.

Texts: None.

Assignments & Grading: Evaluation is based upon a major term paper, student presentations and a take-home examination.



GEOGRAPHY N466 (466)  
APPLIED CARTOGRAPHY (6 credits)

Instructor: J. Anderson Lecture Thurs 18:15 - 20:10 Rm Z-105  
Lab Thurs 20:30 - 22:25 Rm Z-301

Description: This course is designed to offer a greater in-depth study of aspects of cartography introduced in courses N260 and N261. The subject matter will include the history of Canadian Cartography, remote sensing, map compilation, design and production, and computer cartography.

Texts: None. Students will be expected to refer to articles in several cartographic journals.

<u>Assignments</u>	Practical Assignments	50%
<u>&amp; Grading:</u>	Term Paper	20%
	Final Examination	30%

Prerequisite: Geography N260, N261 and twelve additional credits in Geography.

GEOGRAPHY N475 (475)  
HYDROLOGY I (3 credits)

Instructor: D.A. Fraser Thurs 16:00 - 18:00 Room Z-105

Description: History and Scope of Hydrology: see first chapter of Meinzer.  
Preparation for field trip: radioisotopes and radiation in hydrology; soil moisture regimes; glacial deposits and their relation to hydrology; methods of measuring soil moisture.  
Review of field trip: Perch Lake hydrological research, IHD; radioactive waste disposal NRX and NRU, site trail, birch plot, "kettle", forestry lab.  
Precipitation: in the open, forest, rain and snow.  
Water Cycle: specific examples; drought, floods (Hurricane Hazel); water budgets.  
Evaporation: from the soil, transpiration.  
Potential Evapotranspiration: Thornthwaite and Penman  
Soil particles, texture and structure in relation to hydrology, field capacity, wilting point.  
International Hydrological Decade  
Ice and possible pollution problems in the St. Lawrence River: field trip.  
Related topics: James Bay Project.  
Review.

Texts: WARD, P.C., Principles of Hydrology; 1967, McGraw Hill Publishing Co., Toronto, Ontario. This book went out of print in September 1974 and insufficient copies are available for the whole class.  
An alternative book is Hydrology, ed. Oscar E. MEINZER, Dover Publications Inc., New York, 1942.

<u>Assignments</u>	Class and field trip participation.....	10%
<u>&amp; Grading:</u>	One essay.....	20%
	One mid-term test.....	30%
	One final examination.....	40%

Total ... 100%

Prerequisites: One of Geography N371, 372 or 373 or final-year standing in an Honours or Major programme in the Faculties of Science or Engineering.

GEOGRAPHY N476 (476)  
HYDROLOGY II (3 credits)

Instructor: D.A. Fraser Thurs 16:00 - 18:00 Room Z-105

Description: Soil moisture experiments, textural analysis, hydrological models and field trips. Seminar and lectures on specific hydrology topics not covered in depth in Hydrology I. Includes laboratory experiments.

Texts: WARD, P.C., Principles of Hydrology ; 1967, McGraw Hill Publishing Co., Toronto, Ontario. This book went out of print in September 1974 and insufficient copies are available for the whole class.  
An alternative book is Hydrology , ed. Oscar E. MEINZER, Dover Publications Inc., New York, 1942.

<u>Assignments</u>	Class and field trip participation.....	10%
<u>&amp; Grading:</u>	One essay.....	20%
	One mid-term test.....	30%
	One final examination.....	40%
	<b>Total ...</b>	<b>100%</b>

Prerequisite: Geography N475

GEOGRAPHY N491 (492)  
RESEARCH METHODS (6 credits)

Fri. 18:15 - 20:10 Room Z-105

This is a highly individualized course intended for Honours candidates and students should discuss all details with their advisor.

Prerequisite: Final-year standing in Honours Geography.